

J:\CIVIL\057450\DWG\SIGNALS\057450_S01.DWG
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 MKEC Engineering
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| BILL OF MATERIALS (For Information Only) | | |
|--|----------|-----------|
| ITEM | UNIT | QUANT. |
| PAD MOUNTED CONTROLLER & CABINET | EACH | 1 |
| TRAFFIC SIGNAL HEAD (SEE CHART A) W/MOUNTING HARDWARE | EACH | 26 |
| TRAFFIC SIGNAL POLE (SEE CHART B) STEEL | EACH | 4 |
| CONCRETE CONTROLLER PAD | EACH | 1 |
| CONCRETE FOOTING - POLE | EACH | 4 |
| CONDUIT ELBOW 90 | EACH | AS NEEDED |
| CONDUIT ELBOW 90 3" | EACH | AS NEEDED |
| SERVICE BOX | EACH | 4 |
| JUNCTION BOX | EACH | |
| GROUND ROD & CLAMP | EACH | 5 |
| TRAFFIC SIGNAL LAMP RED LED KIT | EACH | 36 |
| TRAFFIC SIGNAL LAMP YELLOW LED KIT | EACH | 36 |
| TRAFFIC SIGNAL LAMP GREEN LED KIT | EACH | 36 |
| TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT | EACH | 4 |
| TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT | EACH | 4 |
| TRAFFIC SIGNAL LAMP LED (12" COMBINATION) | EACH | 8 |
| ENTRANCE HEAD | EACH | 1 |
| CIRCUIT BREAKER & BOX 70 AMP | EACH | 1 |
| PEDESTRIAN PUSHBUTTON W/SIGN | EACH | 8 |
| LEAD-IN-WIRE NO. 6 A.W.G. 1/c | LIN. FT. | 115 |
| STRANDED NO. 8 A.W.G. 1/C (GROUND) | LIN. FT. | 1015 |
| MULTI-CONDUCTOR CABLE NO. 16 A.W.G. 2/C (V3) | LIN. FT. | 30 |
| MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 5/C | LIN. FT. | 720 |
| MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 7/C | LIN. FT. | 1845 |
| VIDEO CABLE 75 OHM COAXIAL (BELDON 8281)(CX) | LIN. FT. | 1061 |
| CONDUIT 1" RGC | LIN. FT. | 55 |
| CONDUIT 2" RGC | LIN. FT. | 35 |
| CONDUIT 3" RGC | LIN. FT. | 630 |
| CAMERA HOUSING | EACH | 4 |
| VIDEO DETECTION CAMERA & MOUNTING HARDWARE (RISER BRACKET) | EACH | 4 |
| VIDEO DETECTION PROCESSOR UNIT | EACH | 1 |
| VIDEO MONITOR | EACH | 1 |
| TETHER WIRE 1/4" ASTM A475 SIEMENS-MARTIN GRADE MIN. | LIN. FT. | |
| STREET NAME SIGNS W/ MOUNTING HARDWARE (D-3) | EACH | 8 |
| LEFT TURN YIELD ON GREEN W/ MOUNTING HARDWARE (R10-12) | EACH | 4 |
| REMOVAL OF EXISTING TRAFFIC CONTROL EQUIPMENT** | EACH | 1 |

| TRAFFIC SIGNAL POLE SUMMARY (CHART B) | | | | | | | | | | |
|---------------------------------------|---------------------|------|------------|----------------|-------|-----|-----|------------------------|-----------------|-----------------|
| POLE NO. | STATION | TYPE | ARM LENGTH | SIGNALS ON ARM | X1 | X2 | X3 | OTHER EQUIPMENT ON ARM | SIGNALS ON POLE | SIGNALS ON POLE |
| 5 | 13+45.56, 49.5' Lt. | B | 54' | 4-E | 11.5' | 11' | 11' | 1-D, 1-G, 1-H, 1-I | 1-E, 2-F | - |
| 6 | 13+94.19, 62.7' Rt. | B | 64' | 4-E | 11.5' | 11' | 11' | 1-D, 1-G, 1-H, 1-I | 1-E, 2-F | 2-J |
| 7 | 14+86.01, 54.2' Lt. | B | 56' | 4-E | 11.5' | 11' | 11' | 1-D, 1-G, 1-H, 1-I | 1-E, 2-F | - |
| 8 | 15+49.36, 63.8' Rt. | B | 56' | 4-E | 11.5' | 11' | 11' | 1-D, 1-G, 1-H, 1-I | 1-E, 2-F | 2-J |

- A - Joint Use Steel Pole with Mast Arm
- B - Standard Steel Pole with Mast Arm
- C - Pedestal Pole (10" Aluminum)
- D - Left Turn Sign (R10-12)
- E - Traffic Signal
- F - Pedestrian Signal with Push Button
- G - Street Name Sign
- H - Video Detection Camera
- I - Wind Damper
- J - Street Name Sign (9" Metro)(See Sh. No. 124 for details)

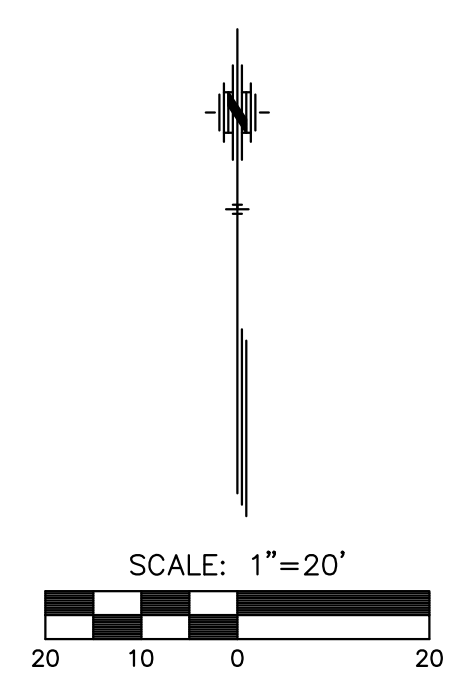
| STREET NAME SIGN SUMMARY | | |
|--------------------------|-----------|----------|
| LEGEND | 60" x 18" | 9" METRO |
| Pawnee | 2 | |
| SE Blvd. | 2 | |
| Pawnee 2300 S | | 1 |
| Pawnee 2400 S | | 1 |
| SE Blvd. 1800 E | | 1 |
| SE Blvd. 1700 E | | 1 |
| TOTAL | 4 | 4 |

Letters shall be series "E" Modified

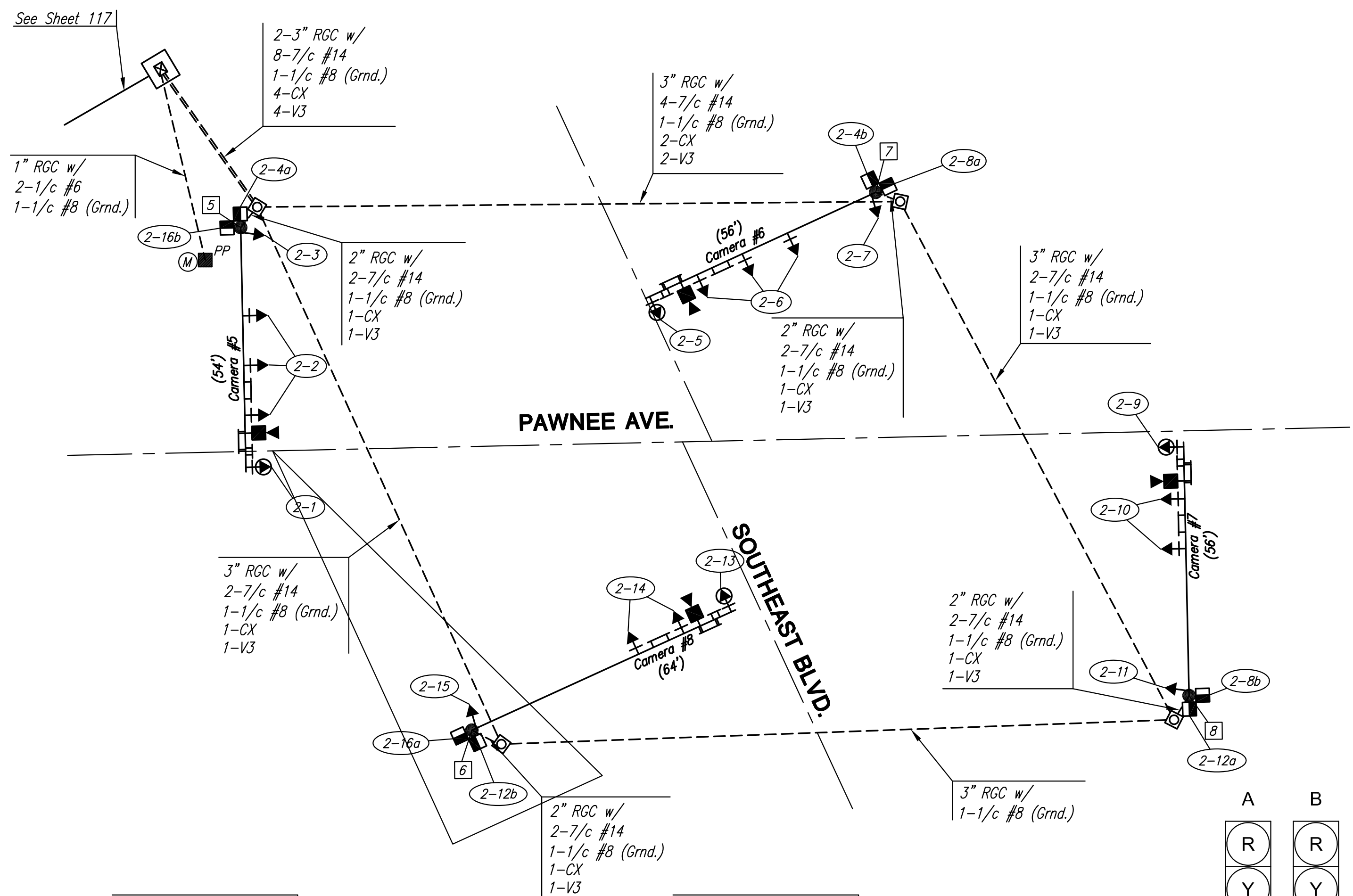
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|--------|--------------|------|-----------|--------------|
| STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
| KANSAS | 87 N-0597-01 | 2016 | 118 | 191 |



- LEGEND**
- Steel Traffic Signal Pole (Joint use)
 - Steel Traffic Signal Pole (Std. Pole)
 - ⊕ Steel Traffic Signal Pole (Pedestal)
 - Traffic Signal Indication (Type A) w/Backplate
 - ⊖ Traffic Signal Indication (Type I) w/Backplate
 - ⬇ Mast Arm Suspended Traffic Signal
 - Video Detection Camera
 - Service Box
 - ⊞ Pedestrian Indication
 - Rigid Galvanized Conduit (RGC)
 - ⊞ Overhead Street Name Sign
 - ⊞ Overhead Sign R10-12 (Lt. Turn Yield on Green)
 - ⊞ Wind Damper
 - PP Power Pole
 - ⊞ Meter Box and Power Disconnect
 - ⊞ Controller and Pad
 - CX Video Coax Cable
 - V3 Video Power Cable (#16 A.W.G. 3/c)

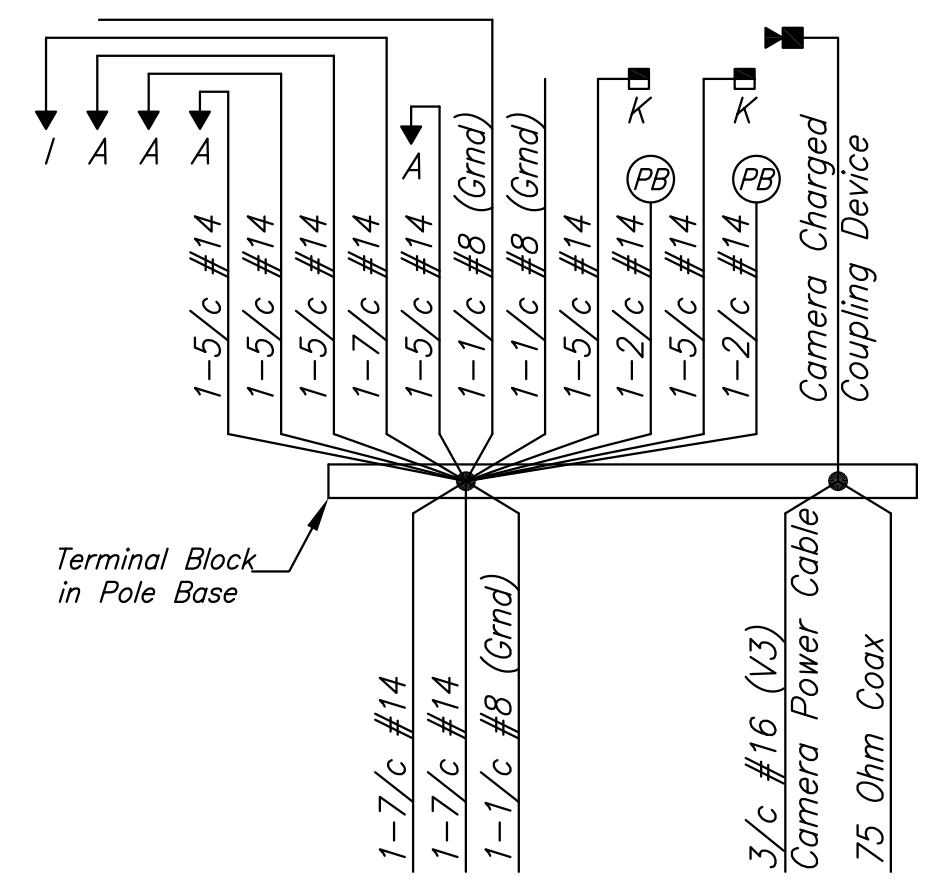


| TRAFFIC SIGNAL HEAD SUMMARY (CHART A) | | | | |
|---------------------------------------|------|-------|------------------|----------|
| SIGNAL NO. | TYPE | SIZE | MOUNTING BRACKET | QUANTITY |
| 2-1 | I | 5-12" | TYPE I | 1 |
| 2-2 | A | 3-12" | TYPE I | 3 |
| 2-3 | A | 3-12" | TYPE III | 1 |
| 2-4a, 2-4b | K | 1-12" | TYPE II | 2 |
| 2-5 | I | 5-12" | TYPE I | 1 |
| 2-6 | A | 3-12" | TYPE I | 3 |
| 2-7 | A | 3-12" | TYPE III | 1 |
| 2-8a, 2-8b | K | 1-12" | TYPE II | 2 |
| 2-9 | I | 5-12" | TYPE I | 1 |
| 2-10 | A | 3-12" | TYPE I | 2 |
| 2-11 | A | 3-12" | TYPE III | 1 |
| 2-12a, 2-12b | K | 1-12" | TYPE II | 2 |
| 2-13 | I | 5-12" | TYPE I | 1 |
| 2-14 | A | 3-12" | TYPE I | 2 |
| 2-15 | A | 3-12" | TYPE III | 1 |
| 2-16a, 2-16b | K | 1-12" | TYPE II | 2 |

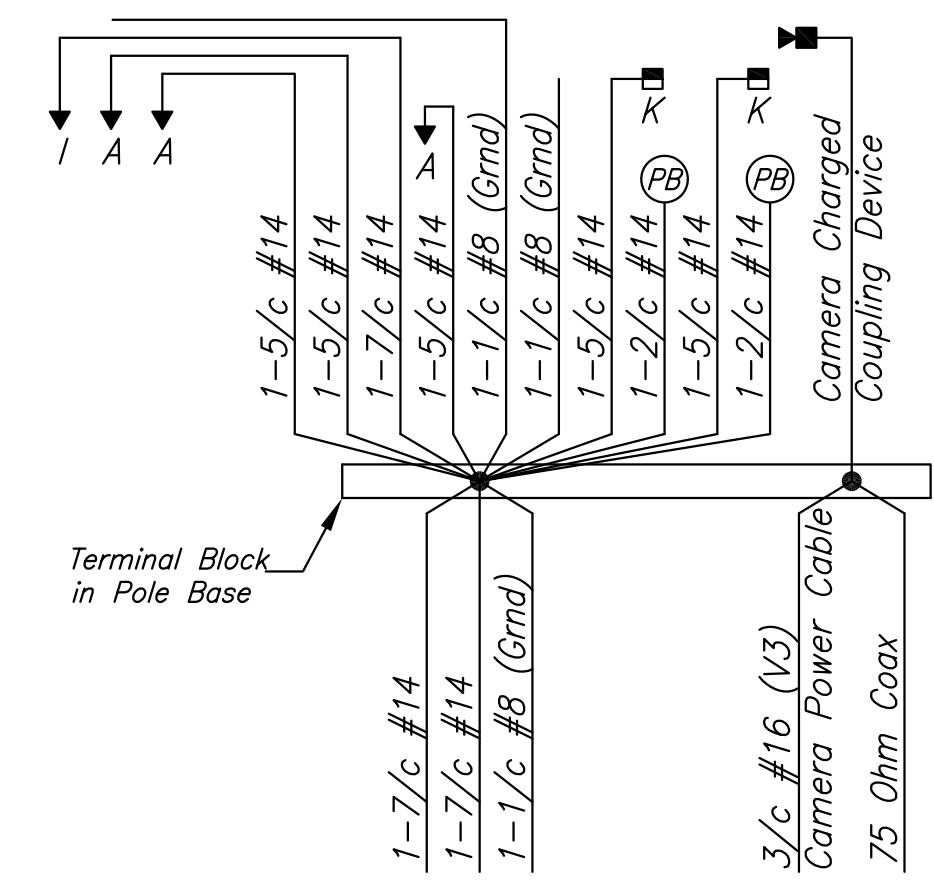


- EQUIPMENT SPECIFICATIONS 2070 CONTROLLER**
- A. Controller Units: The 2070L controllers supplied shall meet the requirements:
 1. The 2070L controllers shall have a 19" EIA rack mountable chassis(mated to the 170 cabinet). Controllers shall be EAGLE or ECONOLITE.
 2. 2070-1B CPU module with RJ-45 Ethernet port.
 3. 2070-2A C1 field I/O module for compatability with CalTrans style C1 connector.
 4. 2070-3B 8x40 front panel whith LCD display.
 5. 2070-4A 10 amp power supply.
 6. 2070-7A asynchronous serial communications module (RS-232)
 7. Any unused slot position shall have a cover plate.
 - B. Conflict Monitors:

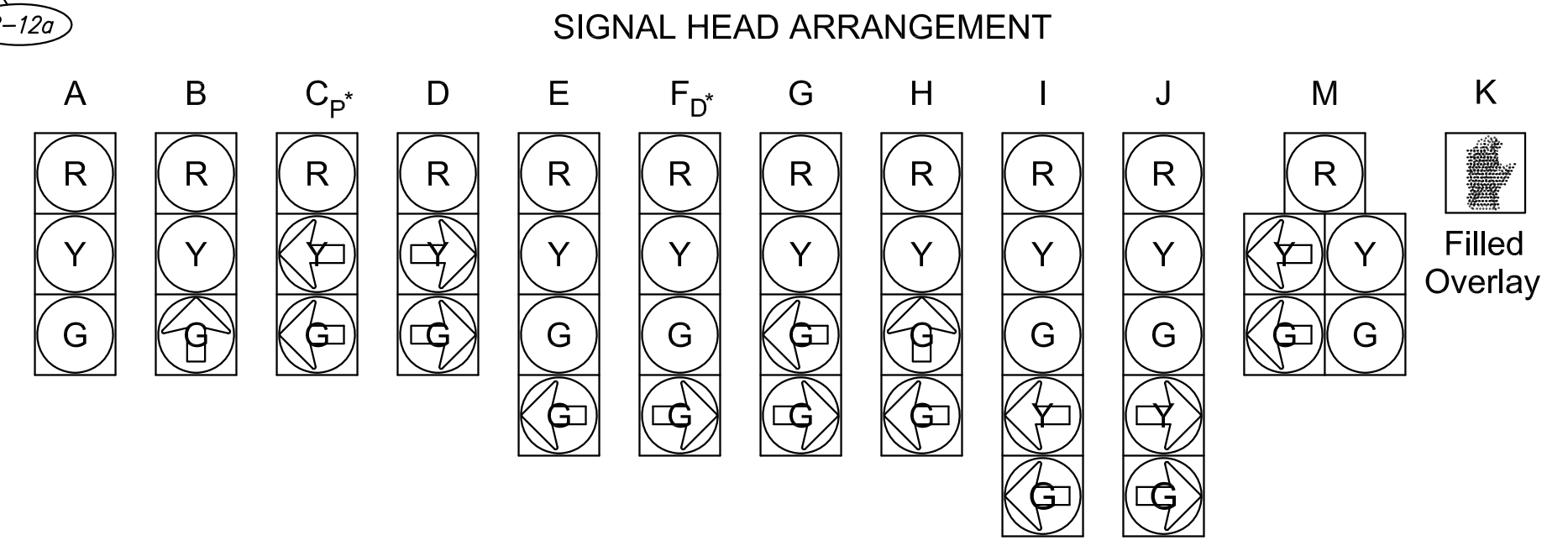
The Conflict Monitors supplied shall be 2010 ECL conflict Monitors.
 - C. 1-Loop-back cable for 2070-2A Field I/O (Type 170, 104 pin and 37 pin connector).
 - D. 1-Loop-back cable for 2070-7a port



Pole 5 and 7



Pole 6 and 8



12" LED lenses - vehicular and pedestrian

NOTE: The contractor shall supply and install all necessary materials and equipment for the complete installation and operation of the traffic signal system whether specifically mentioned or not.

- * Subscript "P" indicates programmed signals.
- * Subscript "D" indicates dual-mode green/yellow arrow section.
- ** Removal of existing traffic signal equipment shall include removal of foundations, service boxes, and junction boxes. See construction traffic control regarding removal of existing signals.

STREET IMPROVEMENTS FOR:
PAWNEE AVENUE
 FROM HYDRAULIC TO POPLAR
 WICHITA, KANSAS

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PAWNEE AVE. AND SOUTHEAST BLVD. WIRING PLAN

| | | |
|-------------|--------------|---------|
| PROJECT NO. | 87 N-0597-01 | |
| DATE | DATE | |
| SCALE | NONE | |
| DESIGNED | DRAWN | CHECKED |
| JRA | JSB | JRA |
| NO. | REVISION | DATE |